[0027] FIG. **7** shows a schematic depiction of a micrograph illustrating the guard frame concept for bubble size measurement.

[0028] FIG. **8***a* depicts macroscope images of the fresh products D (0.02% Tween 20), E (0.02% Tween 60), and F (0.02% Panodan) described in Example 7. Also shown is an image for the comparative control sample (labelled Cont).

[0029] FIG. **8***b* depicts macroscope images of the chill stored products D, E, and F described in Example 7. Also shown is an image for the comparative control sample (labelled Cont).

[0030] FIG. **9** depicts the variation of dilational elastic modulus with time for HFBII, HFBII+SMP and HFBII+SMP+co-surfactant mixtures of Example 8.

[0031] FIG. **10** depicts a photograph of the aerated product prepared using a level of Co-surfactant that is outside of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0032] In one aspect of the invention is a chill, ambient frozen aerated food composition including but not limited to:

[0033] a. at least 0.01 wt. % of total hydrophobin(s) selected from the group consisting of HFBII, HFBI or Cerato Ulmin or blends thereof added in isolated form to the food composition;

[0034] b. one or more Co-surfactants in the total concentration range of about 0.001 to less than about 0.2 wt. % (preferably less than about 0.1%), and the Co-surfactant(s) to total hydrophobin wt. ratio is in the range of about 0.02 to about 1.0. (Preferably the Co-surfactant to hydrophobin wt. ratio is at least about 0.05, more preferably at least about 0.3 and preferably at most about 0.75); and

[0035] c. one or more Secondary protein(s) that are different from hydrophobin(s); wherein said Secondary protein (s) are present in a total concentration range of about 0.25 to less than 6.0 wt. % (Preferably the total Secondary protein(s) are at least 0.5 or 1.0 wt. % and at most 4 or 5 wt. %).

[0036] Advantageously the total hydrophobin(s) concentration is at most 1.5 wt. %. Preferably the Co-surfactants is or are water soluble non-ionic surfactant(s). More preferably the Co-surfactant(s) are selected from Polysorbates, polyglycerol esters of alkyl or alkenyl fatty acids, diacetyl tartartic acid esters of mono-/di-glycerides, sucrose esters with an HLB>about 8 or blends thereof. Most preferably the Co-surfactant(s) has a minimum effective HLB value of about 8. Effective HLB value is here defined as the arithmetic mean of the HLB values of a blend of Co-surfactants. Advantageously the Co-surfactant(s) is selected from Tweens 20, 60 or 80, PGE-O-80; Panodan-Visco Lo 2000 and blends thereof.

[0037] In the case of the frozen embodiment, preferably the average bubble diameter (d3, 2) is at least 10% smaller after the standard temperature abuse protocol described below than the same product prepared the same way but absent either hydrophobin(s), Co-surfactant(s) or if both are present then outside the total Co-surfactant(s) to hydrophobin(s) ratio range of about 0.02 to less than 1.0. Preferably the average bubble size is at least 20, 30, 40 or 50% smaller.

[0038] Preferably the average bubble diameter d(3, 2) of the freshly prepared frozen product stored at below about −15° C. and pre-temperature abuse is at least 10% smaller, preferably 15% smaller, and more preferably 20% smaller than the same product prepared the same way but absent either hydrophobin (s), Co-surfactant(s) or if both are present then outside the total Co-surfactant(s) to hydrophobin(s) ratio range of about 0.02 to less than 1.0.

[0039] In the case of the chill or ambient embodiment, preferably after 6 weeks storage at 5 C no more than 10 bubbles, preferably no more than 7 bubbles, more preferably no more than 5 bubbles and most preferably no more than 3 bubbles of a size greater than 10 mm in diameter are observed in a sample size of 9437 mm squared area where the sample is in a 6 mm deep container and had an initial overrun between 30 and 200% overrun, more preferably between 50 and 150% overrun.

[0040] In another aspect of the invention is a process of making an aerated food composition including but not limited to the steps of:

[0041] a. Blending the food composition ingredients together and mixing;

[0042] b. adding hydrophobin and a Co-surfactant or Co-surfactants to the chilled mix of step (a);

[0043] c. Aerating and in the case of the frozen product, freezing the mix of step (b) to produce the aerated and frozen product; and

[0044] d. Optionally further ingredients could be added after aeration for the chill, and ambient case

[0045] e. For the frozen product, cooling the frozen product to a storage temperature of less than about −15 C and;

[0046] f. wherein pasteurisation may be accomplished after step (a) and/or step (b).

[0047] Preferably for the frozen product the process further includes the step of extruding the frozen product from a freezer at a temperature of about −5 C or less.

[0048] All percentages, unless otherwise stated, refer to the percentage by weight, with the exception of percentages cited in relation to the overrun.

Confections

[0049] The term "chill or ambient or frozen confection" means an edible confection made by a mix of ingredients which includes water. Such confections typically contain fat, non-fat milk solids and sugars, together with other minor ingredients such as stabilisers, emulsifiers, colours and flavourings. Frozen confections include ice cream, water ice, frozen yoghurt, sherbets, sorbet and the like. Chill or ambient confections include mousses, desserts, yoghurts, milk shakes and the like.

Aeration

[0050] The term aeration means that gas has been incorporated into a product to form air cells. The gas can be any gas but is preferably, particularly in the context of food products, a food-grade gas such as air, nitrogen or carbon dioxide or a mixture of the aforementioned. The extent of the aeration can be measured in terms of the volume of the aerated product. The stability of the aeration can be assessed by monitoring the volume of the aerated product over time and or the bubble size change over time.

Microstructure

[0051] The microstructure of chill and ambient or frozen confections is critical to their organoleptic properties. The air cells incorporated into confections are preferably small in size which ensures that the confections do not have a coarse texture and also ensures that they deliver a smooth creamy